METHOD AND APPARATUS FOR STATIC SINGLE ASSIGNMENT FORM DEAD CODE ELIMINATION

ABSTRACT

A method and apparatus for SSA dead code elimination includes examining a first instruction off a worklist, wherein the first instruction includes previous link and a write mask and the first instruction is an SSA instruction. The method and apparatus further includes examining at least one second instruction of the machine code, wherein the at least one second instructions are sources of the first instruction and the at least one second instructions are SSA instruction. In the method and apparatus, each of the at least one second instructions include a previous link and a write mask. The method and apparatus further includes determining if any elements within a particular field are live for the at least one second instruction. If no the elements are live, the method and apparatus provides for deleting the first instruction from the machine code as it is determined that this instruction is extraneous, dead code.